

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P308178

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-3000K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P308178  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-3000K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"  
POLYCARB SHEET  
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

**Summary**

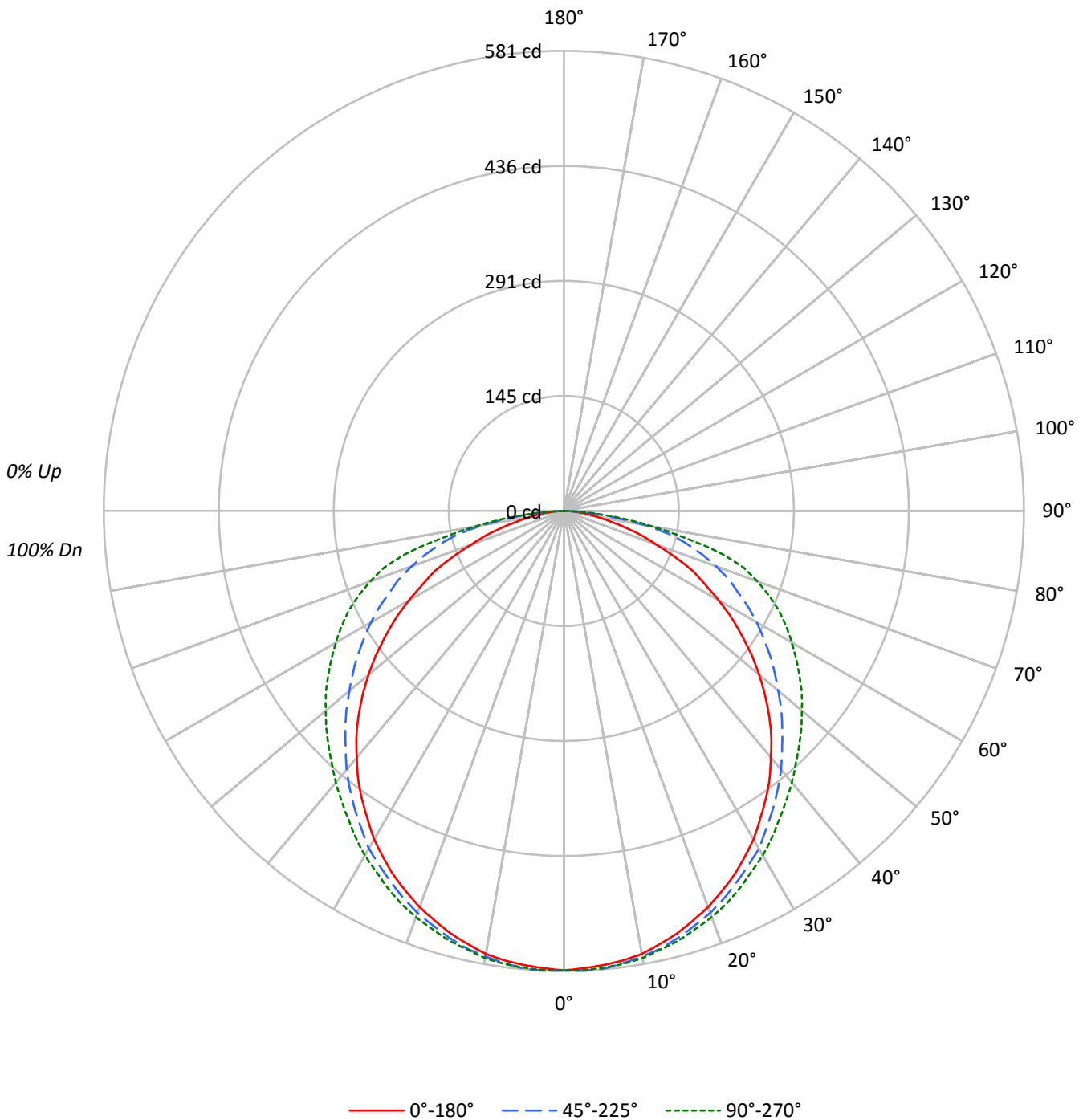
Lumens per Lamp: N/A  
Luminaire Lumens: 1762.0 lumens  
Efficiency: N/A  
Efficacy: 79.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1561	1561	1561
5°	1555	1567	1564
10°	1552	1561	1567
15°	1539	1555	1564
20°	1525	1547	1563
25°	1508	1535	1561
30°	1489	1530	1561
35°	1461	1512	1559
40°	1429	1499	1573
45°	1396	1485	1599
50°	1349	1480	1643
55°	1288	1491	1705
60°	1214	1513	1788
65°	1147	1543	1911
70°	980	1609	2046
75°	820	1676	2126
80°	671	1619	1774
85°	584	1201	1303



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.0	3.1
10°-20°	157.3	8.9
20°-30°	238.4	13.5
30°-40°	287.9	16.3
40°-50°	302.5	17.2
50°-60°	284.6	16.2
60°-70°	237.3	13.5
70°-80°	157.2	8.9
80°-90°	41.9	2.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	450.7	25.6
0°-40°	738.5	41.9
0°-60°	1325.6	75.2
0°-90°	1762.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1762.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	580	580	580	580	580	
5°	576	577	580	580	579	55
15°	552	555	558	560	561	156
25°	508	511	517	524	526	234
35°	445	449	460	470	475	278
45°	367	372	390	410	420	283
55°	274	287	318	350	364	246
65°	180	196	242	282	300	175
75°	79	110	161	194	204	86
85°	19	29	39	42	42	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	580.2	580.2	580.2	580.2	580.2
2.5°	578.0	579.1	581.3	581.3	580.2
5°	575.8	576.9	580.2	580.2	579.1
7.5°	572.4	573.5	575.8	578.0	576.9
10°	568.0	569.1	571.3	573.5	573.5
12.5°	560.2	561.3	565.8	566.9	566.9
15°	552.4	554.6	558.0	560.2	561.3
17.5°	542.4	544.6	549.1	553.5	553.5
20°	532.4	534.6	540.2	544.6	545.8
22.5°	520.2	523.5	529.1	534.6	536.9
25°	508.0	511.3	516.9	523.5	525.7
27.5°	493.5	496.8	504.6	512.4	513.5
30°	479.1	482.4	492.4	499.1	502.4
32.5°	461.3	465.7	475.7	485.7	489.1
35°	444.6	449.0	460.2	470.2	474.6
37.5°	426.8	431.3	443.5	455.7	461.3
40°	406.8	412.4	426.8	440.2	447.9
42.5°	387.9	393.5	407.9	425.7	433.5
45°	366.8	372.4	390.1	410.1	420.1
47.5°	344.6	351.2	372.4	396.8	406.8
50°	322.3	330.1	353.5	381.2	392.4
52.5°	299.0	309.0	335.7	365.7	379.0
55°	274.5	286.8	317.9	350.1	363.5
57.5°	251.2	262.3	299.0	333.5	347.9
60°	225.6	240.1	281.2	316.8	332.3
62.5°	201.2	216.7	262.3	300.1	316.8
65°	180.1	195.6	242.3	282.3	300.1
67.5°	152.3	173.4	225.6	263.4	281.2
70°	124.5	153.4	204.5	243.4	260.1
72.5°	103.4	131.2	183.4	222.3	237.9
75°	78.9	110.0	161.2	194.5	204.5
77.5°	58.9	91.1	137.8	154.5	155.6
80°	43.3	70.0	104.5	110.0	114.5
82.5°	30.0	48.9	67.8	74.5	76.7
85°	18.9	28.9	38.9	42.2	42.2
87.5°	10.0	11.1	13.3	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)